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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO	
09/331,729	08/26/1999	FRANK OSAN	514425-3732	2014	
	00/ ZJ/Z//04			EXAMINER	
CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			DOTE, JANIS L		
			ART UNIT	PAPER NUMBER	
			1756		
			DATE MAILED: 08/25/2004		

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary    Saminar		Application No.	Applicant(s)
Period for Reply  A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE of THIS COMMUNICATION.  Edinations of time may be residuel under the provision of 3 CPR 1.15(6). In no exercit, however, may a reply be timely filed other SX (6) MONTHS from the mailing date of this communication of the communication of the reply specified busines the provision of 3 CPR 1.15(6). In no exercit, however, may a reply be timely filed other SX (6) MONTHS from the mailing date of this communication. If INO particle for exply specified busines the file of the system of the SX (6) MONTHS from the mailing date of this communication. If INO particle for exply similar the statutory misinters of the statutory of the statutory misinters of the statutory of the statutory misinters of the statutory misinters. The statutory misinters of the statutory misinters of the statutory misinters of the statutory misinters of th		09/331,729	OSAN ET AL.
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Status   1  Responsive to communication(s) filed on 06 August 2004.   2a)	A I E OF THIS COMMUNICATION ay be available under the provisions of 37 CFR of S from the mailing date of this communication. Specified above is less than thirty (30) days, a register is specified above, the maximum statutory period the set or extended period for reply will, by statute the Office later than three months after the mail	136(a). In no event, however, may a reply within the statutory minimum of thirty will apply and will expire SIX (6) MONT to become ARA	eply be timely filed  y (30) days will be considered timely.  THS from the mailing date of this communication.
2a) ☐ This action is FINAL. 2b) ☑ This action is non-final.  3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the modes of in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) ☑ Claim(s) 35.36.38.39.41-53.55 and 56 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5) ☐ Claim(s) 48 is/are allowed.  6) ☒ Claim(s) 35.36.38.39.41-47.49-53.55 and 56 is/are rejected.  7) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) ☒ The specification is objected to by the Examiner.  10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.11 ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-triority under 35 U.S.C. § 119  12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) ☒ All b) ☐ Some * c) ☐ None of:  1. ☒ Certified copies of the priority documents have been received.  2. ☐ Certified copies of the priority documents have been received in Application No application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.  1. ☐ Certified copies of the Office action for a list of the certified copies not received.  1. ☐ Interview Summary (PTO-413) Paper Not(s)/Mail Date			
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3) Since this application is in condition for allowance except for formal matters, prosecution as to the modes of in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4) Claim(s) 35.36.38.39.41-53.55 and 56 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.  5) Claim(s) 46 is/are allowed.  6) Claim(s) 35.36.38.39.41-47.49-53.55 and 56 is/are rejected.  7) Claim(s) is/are objected to.  8) Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) The specification is objected to by the Examiner.  10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.10 The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-Priority under 35 U.S.C. § 119  12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) All b) Some * c) None of:  1. Certified copies of the priority documents have been received.  2. Certified copies of the priority documents have been received in Application No  3. Copies of the certified copies of the priority documents have been received in this National Star application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.    Interview Summery (PTO-413) Paper Note) Paper Note of Informal Patent Application (PTO-152 February Processors)   Notice of Informal Patent Application (PTO-152 February Processors)		·· <del>·</del>	
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims  4)	<b>, ——</b>		ore prospection on to the marks:
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4a) Of the above claim(s) is/are withdrawn from consideration.  5) □ Claim(s) 48 is/are allowed.  6) □ Claim(s) 35,36,38,39,41-47,49-53,55 and 56 is/are rejected.  7) □ Claim(s) is/are objected to.  8) □ Claim(s) are subject to restriction and/or election requirement.  Application Papers  9) □ The specification is objected to by the Examiner.  10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner.  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.11 □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-  Priority under 35 U.S.C. § 119  12) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  a) □ All b) □ Some * c) □ None of:  1. □ Certified copies of the priority documents have been received.  2. □ Certified copies of the priority documents have been received in Application No  3. □ Copies of the certified copies of the priority documents have been received in this National Star application from the International Bureau (PCT Rule 17.2(a)).  * See the attached detailed Office action for a list of the certified copies not received.    Notice of References Cited (PTO-892)			
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- 1. A request for continued examination (RCE) under 37 CFR

  1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR

  1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicants' submission filed on Aug. 6, 2004, has been entered.
- 2. The examiner acknowledges the cancellation of claim 58 and the amendments to claims 47, 50, and 52, filed on Jun. 28, 2004, which was entered upon the filing of the RCE on Aug. 6, 2004. Claims 35, 36, 38, 39, 41-53, 55, and 56 are pending.

The examiner notes that the originally filed specification at page 5, line 27, provides antecedent basis for the term "cycloolefin" recited in currently amended claims 50 and 52.

3. The objections to the specification set forth in the Final office action mailed on Feb. 9, 2004 (CTFR020904), paragraph 3, have been withdrawn in response to the paragraphs inserted at page 4, before the last line, and the amended paragraph

beginning at page 25, line 1, of the specification, filed on Jun. 28, 2004, which was entered on Aug. 6, 2004.

The rejections of claims 35, 36, 38, 39, 41-47, 49-52, 55, 56, and 58, under 35 U.S.C. 112, second and first paragraphs, set forth in CTFR020904, paragraphs 7 and 9, respectively, have been withdrawn in response to the paragraphs inserted at page 4, before the last line, of the specification, filed on Jun. 28, 2004, which was entered on Aug. 6, 2004, adding the description of the German standard DIN 53461-B (January 1987).

The objection to claim 47 set forth in CTFR020904, paragraph 10, has been withdrawn in response to the amendment to claim 47 filed on Jun. 28, 2004, which was entered on Aug. 6, 2004.

As discussed in the Advisory action mailed on Jun. 14, 2004, the terminal disclaimer filed on Jun. 1, 2004, disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration dates of copending US application 09/000,330 and US Patent No. 6,210,852, has been reviewed and is accepted. The terminal disclaimer has been recorded. Accordingly, the rejections under the judicially created doctrine of obviousness-type double patenting of claims 35, 36, 44-47, 49, 55, and 59 over claims 1-5 of US Patent No. 6,210,852 Bl (Nakamura'852), and of claims 35, 36,

38, 39, 41, 46, 47, 49, 50, 51, 55, and 58, over claims 16-19 and 21-27 of copending US Application No. 09/000,330 in view of Diamond, Handbook of Imaging Materials, p. 170, and US 5,707,772 (Akimoto), set forth in the CTFR020904, paragraphs 15 and 16, respectively, have been withdrawn.

4. The amendment filed on Jun. 28, 2004, which was entered upon the filing of the RCE on Aug. 6, 2004, is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The disclosure in the paragraphs inserted at page 4, before the last line, of the specification, describing the conditions set forth in the German Standard DIN 53461-B (January 1987) for determining the values of the heat-distortion temperature (HDT), lacks antecedent basis in the originally filed specification. The originally filed specification does not define the German standard DIN 53461-B, or the experimental conditions under which the HDT is determined. Nor does the originally filed specification disclose the date of the particular version of the standard that was used.

Applicants are required to cancel the new matter in the reply to this Office Action.

Applicant's arguments filed on Jun. 28, 2004, and on Jun. 1, 2004, have been fully considered but they are not persuasive.

Applicants assert in that the "appropriate revision of the DIN 53461 would be the one that was currently in use at the time of the filing of the application (revised January 1987)."

Applicants further state that "[i]f applicants would have wanted the earlier version 1969 revision, the specification would have stated that."

However, as discussed in the Advisory actions mailed on Jun. 14, 2004, and Jul. 20. 2004, there is no disclosure in the originally filed specification that would have led a person having ordinary skill in the art to the inevitable conclusion that the version of the German DIN standard disclosed in the specification was that of January 1987. Nor is there any evidence on the present record that shows that the January 1987 version was the version currently used by applicants at the time the application was filed. Applicants' assertions are merely attorney arguments that are not supported by any evidence. For example, applicants have not provided an affidavit from an expert in the art of toners that the DIN 5341-B of January 1987

was that used in the toner art during the filing date of the instant application.

5. The disclosure is objected to because of the following informalities:

In the paragraphs inserted at page 4, before the last line, of the specification, filed on Jun. 28. 2004, which was entered on Aug. 6, 2004, in the section labeled "5.3," the misspelling "ha" in the phrase "[a]fter the load has been maintained . . ." (emphasis added), should be corrected to "has."

Appropriate correction is required.

6. The examiner interprets the term "liquid dried system" recited in claims 53 and 56 as referring to a liquid toner that comprises toner particles that are obtained by a dry polymerization method, which forms toner particles by interfacial polymerization. See instant specification, Toner preparation method 4 at page 17. Applicants in their response filed on Dec. 12, 2000 (Amdt121200), page 9, lines 4-5, agree with the examiner's interpretation of the term "liquid dried system."

7. The examiner notes that the specification defines the intrinsic viscosity recited in instant claims 35, 48, 49, and 56 as the "inherent viscosity" at 135°C for 1 g of polyolefin resin having a cyclic structure uniformly dissolved in 100 ml of decalin. See the instant specification, page 16, lines 2-4.

According to applicants, the term "aerosol silica" recited in instant claim 53 is a synonym for "colloidal silica." See Applicants' response filed on Dec. 12, 2000, page 7, lines 21-22.

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 35, 36, 38, 39, 41-47, 49-52, 55, and 56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 35, 49, and 56, and claims dependent thereon, recite a resin having "a heat distortion temperature [HDT] as measured by the DIN 53461-B method of 70°C or higher."

The originally filed specification does not provide an adequate written description of the standard DIN 53561-B as the version of January 1987. The originally filed specification was silent with respect to the version used. See for example, page 4, lines 22-23, of the originally filed specification, which merely discloses HDT as measured by the DIN 53461-B method.

Applicants' arguments filed on Jun. 1, 2004, and Jun. 28, 2004, regarding the paragraphs inserted in the specification at page 4, before the last line, filed on Jun. 28, 2004, which was entered on Aug. 6, 2004, describing the conditions set forth in the German standard DIN 53461-B (January 1987), have been addressed in paragraph 4, supra.

- 10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- 11. The indicated allowability of claim 53 is withdrawn on further review of WO 97/05529 (WO'529). Rejections based on the cited reference follow.

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12. On further review of the verified English language translation filed on Nov. 4, 2002, contrary to the examiner's statement in the office action mailed on Feb. 6, 2004, paragraph 2, the verified English language translation filed on Nov. 4, 2002, does not appear to be a translation of the certified copy of the priority document, Japanese Patent Application Hei 8-348546. Rather, the translation filed on Nov. 4, 2002, is the translation of the published Japanese Patent Application 2000-284528. Compare JP 2000-284528 (a copy is mailed with this office action), the copy of the certified copy of the priority document, and the translation filed on Nov. 4, 2002. For example, see page 1 of the translation, which identifies the document as "Patent Application Laid-Open Number 2000-284528." 37 C.F.R. 1.55(a)(4) states that "[i]f an English language translation is required, it must be filed together with a statement that the translation of the certified copy [of the non-English priority document, the foreign application] is accurate" (emphasis added). See MPEP 201.15 (8th edition, Rev. 2, May 2004).

Accordingly, applicants have not perfected their claim to foreign priority for the subject matter recited in instant

claims 35, 36, 38, 39, 41-47, 49-53, 55, and 56. Thus, WO'529 is prior art. Rejections based on WO'529 are set forth infra.

13. Claims 35, 36, 44, 45, 49-52, and 55 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 97/05529 (WO'529), as evidenced by applicants' admission at page 21 of the instant specification and the American Chemical Society (ACS) File Registry No. 361391-57-3. See the PTO translation of WO'529 for cites.

WO'529 discloses a toner that is within the compositional limitations of the instant claims. The toner comprises a binder resin, charge control agent, a magenta pigment, and a functional imparting agent, such as HOECHST WAX E. See Toner preparation method I at page 11, and Examples 1 and 2 of Table 2-1 at page 13. The binder resins in Examples 1 and 2 are as follows:

Example 1 - polyolefin having a cyclic structure, T745, which has a Mn of 3800. See Table 3 at page 15. The binder resin is within the binder compositional limitation recited in instant claim 49.

Example 2 - a polyolefin resin having a cyclic structure comprising polyolefin T745 and the polyolefin having a cyclic structure S-8007, which has a Mn of 35,000, Mw of 70,000, an intrinsic velocity of 0.8 dl/g, and a heat distortion

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temperature determined by the DIN 53461-B of greater than 70°. The polyolefin resin S-8007 is present in an amount of 33% by weight of the entire binder resin. See Table 3. The polyolefin S-8007 is within the second resin compositional limitations recited in instant claims 35, 49, and 55. The polyolefin resin of WO'529 is also within the compositional limitations of the polyolefin having a cyclic structure recited in instant claims 50-52. T745 is identified by the instant specification at page 21 as a copolymer of ethylene and norbornene.

ACS File registry No. 361391B57B3 identifies Hoechst wax E as butylene and ethylene esters of fatty acids, montan-wax.

14. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, as applied to claim 35 above, further in view of additional teachings in WO'529. See the PTO translation of WO'529 for cites.

WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, discloses a toner as described in paragraph 13 above, which is incorporated herein by reference.

WO'529 does not exemplify a toner comprising polyolefins having a cyclic structure as recited in instant claim 38.

However, WO'529 discloses that the polyolefins having a cyclic structure may comprise a carboxyl, a hydroxyl, or an amino group. Translation, page 9, lines 14-20. WO'529 discloses that the incorporation of said groups in the polyolefin improves the compatibility of the resins with other resins, and the dispersibility of the pigment. Translation, page 9, lines 16-18.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of WO'529, to incorporate a carboxyl, a hydroxyl, or an amino group in the polyolefins having a cyclic structure in the toner in WO'529's example 2 to improve the dispersibility of the magenta pigment in the binder resin of the toner, because that person would have had a reasonable expectation of successfully obtaining an uniformly colored magenta toner.

15. Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, as applied to claim 35 above,

further in view of additional teachings in WO'529. See the PTO translation of WO'529 for cites.

WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, discloses a toner as described in paragraph 13 above, which is incorporated herein by reference.

WO'529 does not exemplify a toner comprising polyolefins having a cyclic structure as recited in instant claims 39 and 41. However, WO'529 discloses that the polyolefins having a cyclic structure may have a crosslinked structure by introducing a carboxyl group and adding a metal, such as zinc, copper, or calcium. Translation, page 9, lines 21-26. WO'529 discloses that the introduction of a crosslinked structure in the polyolefin improves the fixation of the toner. Translation, page 9, lines 21-22.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of WO'529, to introduce a carboxyl group and a metal in the polyolefins having a cyclic structure in the toner in WO'529's example 2 to introduce a crosslinked structure in the polyolefins, because that person would have had a reasonable expectation of successfully obtaining a toner with improved fixability.

16. Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, as applied to claim 35 above, further in view of additional teachings in WO'529. See the PTO translation of WO'529 for cites.

WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, discloses a toner as described in paragraph 13 above, which is incorporated herein by reference.

Wo'529 does not exemplify a toner comprising polyolefins having a cyclic structure as recited in instant claims 41-43. However, Wo'529 discloses that the polyolefins having a cyclic structure may have a crosslinked structure by copolymerizing the polyolefin resin with a cyclic structure with a diene monomer, such as norbornadiene or cyclohexadiene. Translation, page 9, lines 21-24. Wo'529 discloses that the introduction of a crosslinked structure in the polyolefin improves the fixation of the toner. Translation, page 9, lines 21-22.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of WO'529, to copolymerize a diene with the polyolefins having a cyclic structure in the toner in WO'529's example 2 to introduce a

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crosslinked structure in the polyolefins, because that person would have had a reasonable expectation of successfully obtaining a toner with improved fixability.

17. Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, as applied to claim 35 above, combined with US 5,707,772 (Akimoto). See the PTO translation of WO'529 for cites.

WO'529, as evidenced by applicants' admission at page 21 of the instant specification and the ACS File Registry No. 361391-57-3, discloses a toner as described in paragraph 13 above, which is incorporated herein by reference.

WO'529 does not exemplify a toner comprising a non-polar wax as recited in instant claims 46 and 47. However, WO'529 discloses that the functional imparting agent can be a wax having a melting point of 60 to 170°C. WO'529 does not limit the type of wax used. Translation, page 10, lines 18-24.

Akimoto teaches low molecular weight polyolefin waxes that have a melting point between 70 and 150°C. Col. 8, line 66, to col. 9, line 5; and Releasing agents 1 to 4 in Table 1 at col. 12. The polyolefin waxes are synthesized in the presence

of a metallocene catalyst. Col. 11, lines 52-67. Akimoto discloses that toners that comprise said polyolefin waxes as releasing agents provide excellent images with excellent storage stability, little off-set, and "slight winding phenomena." See Toners 1 through 7 in Tables 2 and 3, and col. 16, lines 17-18.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Akimoto, to use Akimoto's low molecular weight polyolefin as the function imparting agent in the toners disclosed by WO'529, because that person would have had a reasonable expectation of successfully obtaining toners having the advantages disclosed by Akimoto discussed above.

18. Claims 53 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO'529, as evidenced by applicants' admission at page 21 of the instant specification and Diamond, Handbook of Imaging Materials, pages 227 and 234, combined with US 5,487,965 (Odell). See the PTO translation of WO'529 for cites.

WO'529 discloses a liquid toner that comprises 60 wt% of a carrier liquid, ISOPAR H, and 40 wt% of a mixture of solids comprising 1 part by weight of carbon black, 0.5 part by weight of a charge control agent, and 98.5 parts by weight of a binder

resin, based on 100 parts by weight of solids. The mixture of solids are kneaded in the presence of the carrier liquid in a "sandmill" to form the liquid toner. See the translation, Toner preparation method III, Liquid Toner, page 12, and Example 19 in Table 2-2 at page 14. Example 19 comprises a binder resin comprising the polyolefin having a cyclic structure, T745, which has a Mn of 3800, and the polyolefin having a cyclic structure, S-8007. See Table 3 at page 15. The polyolefin having a cyclic structure S-8007 has a Mn of 35,000, Mw of 70,000, an intrinsic velocity of 0.8 dl/g, and a heat distortion temperature determined by DIN 53461-B of greater than 70°. The polyolefin S-8007 is present in an amount of 39% by weight of the entire binder resin. See Table 3. The polyolefin S-8007 is within the second resin compositional limitations recited in instant claim 56.

WO'529 does not explicitly disclose that the resultant kneaded mixture of solids are toner particles. However, as discussed above, the WO'529 liquid toner is obtained by kneading the mixture of solids in the presence of the carrier liquid in a "sandmill." It is well-known in the art of liquid toners that "liquid toners are charged, colored particles suspended in a nonconductive liquid," where the "liquid toner particles are significantly smaller than dry toner particles." Diamond,

page 227, section 6.1, lines 1-5. Diamond further discloses that liquid toners are conventionally obtained by milling pigment with resin and liquid dispersant until a dispersion of a specific particle size has been achieved. Diamond, page 234, section 6.3, lines 1-7. Thus, it is reasonable to conclude that the WO'529 liquid toner comprises toner particles comprising the binder resin, colorant, and charge control agent dispersed in the liquid carrier. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

The binder resin in the above liquid toner is not present in the amount of 85 to 95 wt% as recited in instant claim 53.

Nor does the liquid toner comprise a wax as recited in instant claim 53. However, WO'529 discloses that liquid toners can comprise 15 to 50 wt% of binder resin, 0-10 wt% of colorant, 0-5 wt% of a charge control agent, 0-10 wt% of a functioning agent, such as a wax, and 50 to 70 wt% of an liquid carrier, based on the total weight of the liquid toner. Translation, Table 1 at page 3. Thus, the reference teaches that the toner particles can be present in an amount of 30 to 50 wt% based on the total weight of the liquid toner, where the binder resin and the wax may be present in the toner particles in amounts of 50 to 100 wt% to 0 to 20 wt%, respectively. The binder resin amount range of 50 to 100 wt% encompasses the range of 85 to

95 wt% recited in instant claim 53. The wax amount of 0 to 20 wt% overlaps the range of 1 to 10 wt% recited in instant claim 53. WO'529 further discloses that the incorporation of a function imparting agent, such as a wax, increase the anti-offset properties for hot-roller fixing. Translation, page 10, lines 20-21. Accordingly, the amounts of binder resin and wax are result-effective variables, the variation of which are presumably within the skill of the ordinary worker in the art.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of WO'529, to vary the amount of the binder resin, through routine experimentation, in the liquid toner disclosed by WO'529, such that the amount would be within the range of 85 to 95 wt% as recited in instant claim 53, and to add a wax in the amount as recited in instant claim 53, because that person would have had a reasonable expectation of successfully obtaining a liquid toner having the properties disclosed by WO'529. Translation, page 2, lines 8-13.

WO'529 does not disclose that the toner particles further comprise aerosol silica as recited in instant claim 53.

Odell teaches that surface additives, such as colloidal silica, in amounts of about 0.3 to about 3 weight percent of the

total weight of the toner may be added to the toner particles to enhance the development properties and performance of the liquid toner. Col. 10, line 66, to col. 11, line 6. The record shows that the amount of about 0.3 to about 3 wt% overlaps the range of 0.1 to 2 wt% recited in instant claim 53. The amount of the colloidal silica is a result-effective variable, variation of which is presumably within the skill of the ordinary person in the art.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Odell, to add colloidal silica in an amount as recited in instant claim 53, because that person would have had a reasonable expectation of successfully obtaining a liquid toner having improved development properties and performance as disclosed by Odell.

Instant claims 53 and 56 recite "a dried polymerized system". In other words, the toner particles are made by a dried polymerization method. These claims are written in product-by-process format. The toner particles in the liquid toner exemplified in example 19 of WO'529 are not made by the dried polymerized method recited in the instant claim. However, as discussed above, the toner particles rendered obvious over the teachings of WO'529 combined Odell meet the compositional limitations recited in the instant claims, and are used for the

same purpose as applicants, as toner particles in a liquid toner. Thus, it appears that the toner particles rendered obvious over the cited prior art are the same or substantially the same as those made by the process recited in the instant claims. The burden is on applicants to prove otherwise. In reMarosi, 218 USPQ 289 (Fed. Cir. 1983); In re Thorpe, 227 USPQ 964 (Fed. Cir. 1985); MPEP 2113.

19. Claim 48 is allowable over the prior art of record.

WO'529 does not teach or suggest a toner comprising a polyolefin having a cyclic structure comprising at least three resins or resin fractions as recited in instant claim 48.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (703) 872-9306.

Any inquiry of papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on

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JLD

Aug. 22, 2004

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